

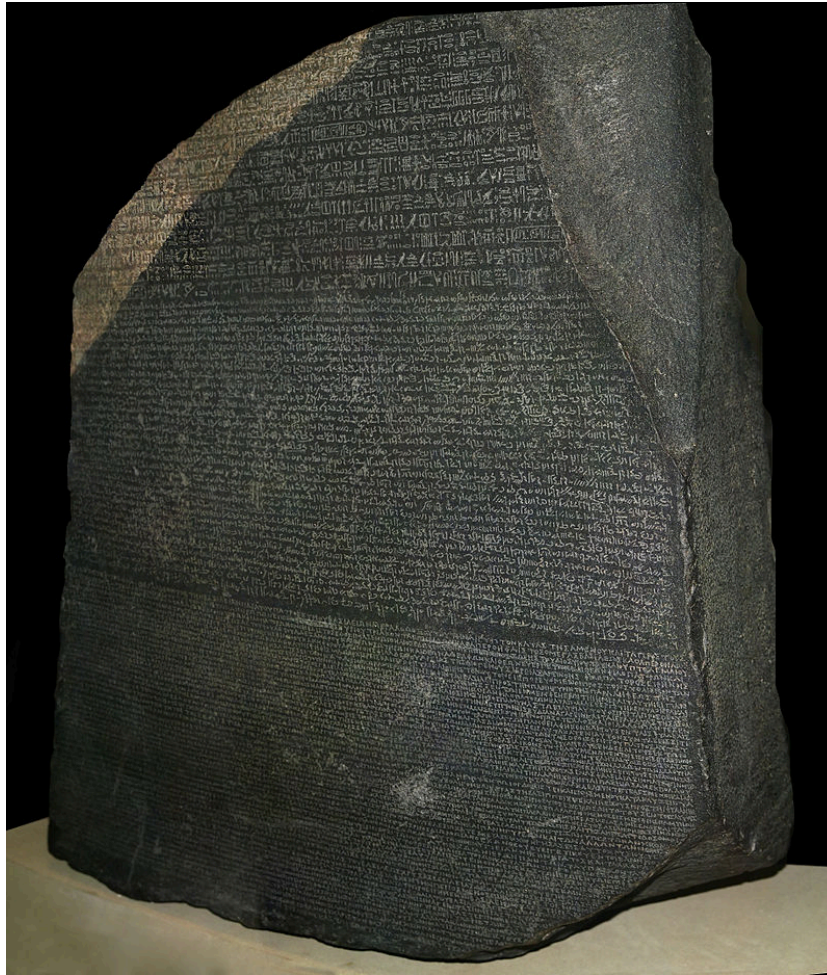
# Rosetta Stone of Digital Representations

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# Rosetta Stone of Digital Representations

Various Digital representations of music (mostly ASCII), encoding this melody:



# Rosetta Stone of Digital Representations



## Braille

○\* ○\* \*○ ○\* ○\* ○○ ○\* \*\* ○○ \*○ \*\*  
○\* ○○ \*○ ○\* ○\* \*\* ○○ ○\* ○○ ○\* ○\* ○\* \*\* \*\* ○○ ○○ ○\*  
\*○ \*○ \*○ \*\* ○○ ○\* ○\* ○○ \*○ \*○ \*○ \*\* \*\* ○\* \*○ \*\* \*\* \*\*

○○ \*\* ○○ ○\* \*\* \*\* ○\* ○\* \*○  
○\* ○\* ○○ \*○ ○\* \*○ \*\* \*○ \*\*  
○\* ○○ \*○ \*\* \*\* ○\* \*\* \*\* \*\*

# Rosetta Stone of Digital Representations



# Plaine & Easie

G-2 bB 2/4 {8.C3DC}{8CC}/{6CF}4F6-F/{FA}4A6-C/{8.C6A}{CBAG}/

# Rosetta Stone of Digital Representations



ABC

X:1

T:Example

M:2/4

K:F

L:1/16

c3 d/2 c/2 c2 c2 | c f f4 z f |

f a a4 z c' | c'3 a c'bag |

# Rosetta Stone of Digital Representations



## DARMS

```
!G !K1- !M2:4  
6E.( 7T(( 6))) 6E( 6) /  
6S(( 9)) 9Q RS 9S /  
9S( 11) 11Q RS 13S /  
13E.( 11S) 13S(( 12 11 10)) /
```

# Rosetta Stone of Digital Representations



## Guido Music Notation

```
[ \clef<"g2"> \key<-1> \meter<"2/4">  
      c2/8. d/32 c c/8 c  
  \bar<2> c/16 f f/4 _/16 f  
  \bar<3> f a a/4 _/16 c3  
  \bar<4> c/8. a2/16 c3 b&2 a g  
]
```

# Rosetta Stone of Digital Representations



## SCORE (User Input)

```
TR/K1F/2 4/C5/D/C/C/C/M/C/F/F/R/F/M/F/A/A/R/C6/M/C/A5/C6/B5/A/G/M/MI;  
E./32/32/E/E/S/S/Q/S/S/S/S/Q/S/S/E./S/S/S/S/S;  
;  
1 3/4 5/6 7/10 11/14 15/16 19;  
;
```



# Rosetta Stone of Digital Representations



## MuseData

Part\_1

Group memberships: score

score: part 1 of 1

\$ Q:8 K:-1 T:2/4 C:4

S

C5	6	1 e.	d	[
D5	1	1 t	d	=[
C5	1	1 t	d	]]
C5	4	1 e	d	[
C5	4	1 e	d	]

measure 2

C5	2	1 s	d	[[
F5	2	1 s	d	]]
F5	8	1 q	d	
rest	2	1 s		
F5	2	1 s	d	

measure 3

F5	2	1 s	d	[[
A5	2	1 s	d	]]
A5	8	1 q	d	
rest	2	1 s		
C6	2	1 s	d	

measure 4

C6	6	1 e.	d	[
A5	2	1 s	d	]\
C6	2	1 s	d	[[
Bf5	2	1 s	d	==
A5	2	1 s	d	==
G5	2	1 s	d	]]

/END

# Rosetta Stone of Digital Representations



## Humdrum

```
**kern
=1-
*clefG2
*k[b-]
*M2/4
8.cc\L
32dd\LL
32cc\JJJ
8cc\L
8cc\J
=2
16cc\LL
16ff\JJ
4ff\
16r
16ff\
=3
16ff\LL
16aa\JJ
4aa\
16r
16ccc\
=4
8.ccc\L
16aa\Jk
16ccc\LL
16bb-\
16aa\
16gg\JJ
*-
```

# Rosetta Stone of Digital Representations



Humdrum

```
**kern
=1-
*clefG2
*k[b-]
*M2/4
8.cc\L
32dd\LL
32cc\JJJ
8cc\L
8cc\J
=2
16cc\LL
16ff\JJ
4ff\
16r
16ff\
=3
16ff\LL
16aa\JJ
4aa\
16r
16ccc\
=4
8.ccc\L
16aa\Jk
16ccc\LL
16bb-\
16aa\
16gg\JJ
*-
```

Humdrum  
\*\*koto

```
**koto
5.|
5||h
5|
5|
=
5||
7||
7
0||
7||
=
7||
9||#
9#
0||
A||
=
A|.
9||#
A||
9||##
9||#
8||
=
*-
```

|| 5. 5 5 5 | 5 7 7 0 7 | 7 9 9 0 A | A. 9 A 9 9 8 |

# Rosetta Stone of Digital Representations



Xalan

' 2--4==1+\*6..4=61144==8..4=114-11==8..4=114-11==8..4=31\*5

' 1=521\*44\*46\*21=6\*26=51=6--7=565

# Rosetta Stone of Digital Representations



## Melisma

Info keysig 1 flat

Note	0	750	72
Note	750	875	74
Note	875	1000	72
Note	1000	1500	72
Note	1500	2000	72
Note	2000	2250	72
Note	2250	2500	77
Note	2500	3500	77
Note	3750	4000	77
Note	4000	4250	77
Note	4250	4500	81
Note	4500	5500	81
Note	5750	6000	84
Note	6000	6750	84
Note	6750	7000	81
Note	7000	7250	84
Note	7250	7500	82
Note	7500	7750	81
Note	7750	8000	79

# Rosetta Stone of Digital Representations



## SKINI

```
// Measure number 1 =0  
// Keysig 1 flat
```

NoteOn	0	1	72	64
NoteOff	0.75	1	72	64
NoteOn	0	1	74	64
NoteOff	0.125	1	74	64
NoteOn	0	1	72	64
NoteOff	0.125	1	72	64
NoteOn	0	1	72	64
NoteOff	0.5	1	72	64
NoteOn	0	1	72	64
NoteOff	0.5	1	72	64

```
// Measure number 2 =2
```

NoteOn	0	1	72	64
NoteOff	0.25	1	72	64
NoteOn	0	1	77	64
NoteOff	0.25	1	77	64
NoteOn	0	1	77	64
NoteOff	1	1	77	64
NoteOn	0.25	1	77	64
NoteOff	0.25	1	77	64

```
// Measure number 3 =4
```

NoteOn	0	1	77	64
NoteOff	0.25	1	77	64
NoteOn	0	1	81	64
NoteOff	0.25	1	81	64
NoteOn	0	1	81	64
NoteOff	1	1	81	64
NoteOn	0.25	1	84	64
NoteOff	0.25	1	84	64

```
// Measure number 4 =6
```

NoteOn	0	1	84	64
NoteOff	0.75	1	84	64
NoteOn	0	1	81	64
NoteOff	0.25	1	81	64
NoteOn	0	1	84	64
NoteOff	0.25	1	84	64
NoteOn	0	1	82	64
NoteOff	0.25	1	82	64
NoteOn	0	1	81	64
NoteOff	0.25	1	81	64
NoteOn	0	1	79	64
NoteOff	0.25	1	79	64

# Rosetta Stone of Digital Representations



**Allegro**

1	1	72	64	0	0.75
2	1	74	64	0.75	0.125
3	1	72	64	0.875	0.125
4	1	72	64	1	0.5
5	1	72	64	1.5	0.5
6	1	72	64	2	0.25
7	1	77	64	2.25	0.25
8	1	77	64	2.5	1
9	1	77	64	3.75	0.25
10	1	77	64	4	0.25
11	1	81	64	4.25	0.25
12	1	81	64	4.5	1
13	1	84	64	5.75	0.25
14	1	84	64	6	0.75
15	1	81	64	6.75	0.25
16	1	84	64	7	0.25
17	1	82	64	7.25	0.25
18	1	81	64	7.5	0.25
19	1	79	64	7.75	0.25

# Rosetta Stone of Digital Representations



## NoteArray

%bar	%mdur	%bdur	%beat	%b40
1	2	1	0	202
1	2	1	0.75	208
1	2	1	0.875	202
1	2	1	1	202
1	2	1	1.5	202
2	2	1	0	202
2	2	1	0.25	219
2	2	1	0.5	219
2	2	1	1.5	0
2	2	1	1.75	219
3	2	1	0	219
3	2	1	0.25	231
3	2	1	0.5	231
3	2	1	1.5	0
3	2	1	1.75	242
4	2	1	0	242
4	2	1	0.75	231
4	2	1	1	242
4	2	1	1.25	236
4	2	1	1.5	231
4	2	1	1.75	225



# Rosetta Stone of Digital Representations



CMN

```
(cmn
staff
treble
f-major
(meter 2 4)
```

```
(bar 1)  (c5 e.) (d5 ) (c5 ) (c5 e) (c5 e)
(bar 2)  (c5 s) (f5 s) (f5 q) sixteenth-rest (f5 s)
(bar 3)  (f5 s) (a5 s) (a5 q) sixteenth-rest (c6 s)
(bar 4)  (c6 e.) (a5 s) (c6 s) (bf5 s) (a5 s) (g5 s)
)
```

# Rosetta Stone of Digital Representations



mono-track

## Director Musices

```
:trackname "track 1"
```

```
(bar 1 n ("C5" 3/16) meter (2 4))
```

```
(n ("D5" 1/32))
```

```
(n ("C5" 1/32))
```

(n ("C5" 1/8))

(n ("C5" 1/8))

```
(bar 2 n ("C5" 1/16))
```

(n ("F5" 1/16))

(n ("F5" 1/4))

```
(n (nil 1/16) rest t)
```

(n ("F5" 1/16) )

```
(bar 3 n ("F5" 1/16))
```

(n ("A5" 1/16))

(n ("A5" 1/4))

```
(n (nil 1/16) rest t)
```

```
(n ("C6" 1/16))
```

```
(bar 4 n ("C6" 3/16))
```

(n ("A5" 1/16))

```
(n ("C6" 1/16))
```

(n ("Bb5" 1/16))

(n ("A5" 1/16))

```
(n ("G5" 1/16))
```

# Rosetta Stone of Digital Representations



ENP

```
(:begin :score
  (:begin :part1
    :staff :treble-staff
    :key-signature :f-major
    :time-signature (2 4)
    (:begin :voicel
      (:begin :measure1
        (1 (
          (6 ((1 :notes (72) :stem-direction :down)))
          (1 ((1 :notes (74) :stem-direction :down)))
          (1 ((1 :notes (72) :stem-direction :down)))
        ))
        (1 (
          (1 ((1 :notes (72) :stem-direction :down)))
          (1 ((1 :notes (72) :stem-direction :down)))
        ))
      ))
    (:begin :measure2
      (2 (
        (1 ((1 :notes (72) :stem-direction :down)))
        (1 ((1 :notes (77) :stem-direction :down)))
        (4 ((1 :notes (77) :stem-direction :down)))
        (1 (-1))
        (1 ((1 :notes (77) :stem-direction :down)))
      ))
    )
  )
)
```

```
(:begin :measure3
  (2 (
    (1 ((1 :notes (77) :stem-direction :down)))
    (1 ((1 :notes (81) :stem-direction :down)))
    (4 ((1 :notes (81) :stem-direction :down)))
    (1 (-1))
    (1 ((1 :notes (84) :stem-direction :down)))
  ))
)
(:begin :measure4
  (1 (
    (3 ((1 :notes (84) :stem-direction :down)))
    (1 ((1 :notes (81) :stem-direction :down)))
  ))
  (1 (
    (1 ((1 :notes (84) :stem-direction :down)))
    (1 ((1 :notes (82) :stem-direction :down)))
    (1 ((1 :notes (81) :stem-direction :down)))
    (1 ((1 :notes (79) :stem-direction :down)))
  ))
)
) ; end :voicel
) ; end :part1
) ; end :score
```

# Rosetta Stone of Digital Representations



## Lilypond

```
\version "2.3.25"
\header {
  crossRefNumber = "1"
  footnotes = ""
  tagline = "Lily was here 2.4.1 -- automatically
converted from ABC"
  title = "Example"
}
voicedefault = {
  \set Score.defaultBarType = "empty"
  \time 2/4   c8.    d32    c32    c8      c8      \bar "|"
c16
f16    f4    r16    f16    \bar "|"    f16    a16    a4
r16
c16    \bar "|"    c8.    a16    c16    b16    a16    g16
\bar "|"
}
\score{
  <<
    \context Staff="default" { \voicedefault }
  >>
}
```

# Rosetta Stone of Digital Representations



# MUP

# header

```
size=12
title bold (18) ""
title bold (14) ""
```

**score**

```
lyricssize=12
staffs=1
time=2/4
beamstyle=4,4
```

**staff 1**

```
clef = treble
key=1&
label=""
```

music

1 1: 8.c5 bm; 32d5; 32c5 ebm; 8c5 bm; 8c5 ebm;

bar

1 1: 16c5 bm; 16f5 ebm; 4f5; 16r; 16f5;

bar

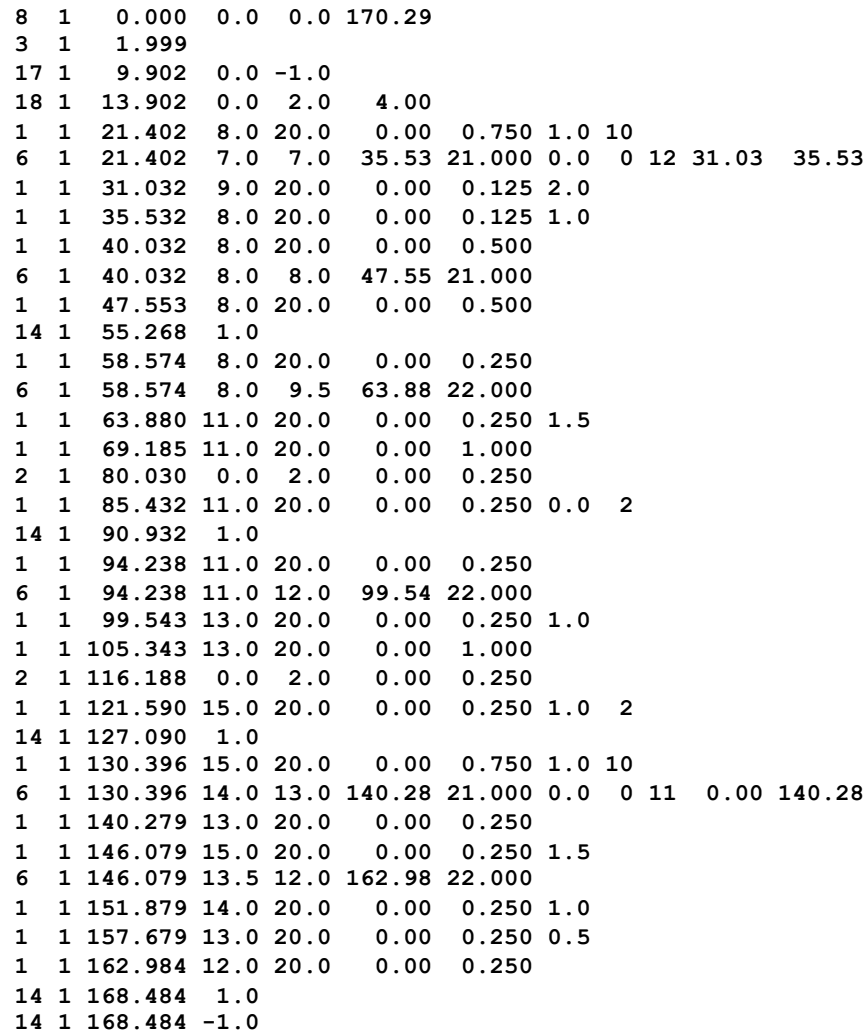
1 1: 16f5 bm; 16a5 ebm; 4a5; 16r; 16c6;

bar

1 1: 8.c6 bm; 16a5 ebm; 16c6 bm; 16b5; 16a5; 16g5 ebm;

bar

## SCORE PMX



# Rosetta Stone of Digital Representations



MEI

```
<measure n="1" xml:id="m_sc_2" left="invis">
  <staff n="1">
    <layer n="1">
      <beam>
        <note xml:id="n_sc_6_0" pname="c" oct="5" dur="8" dots="1"/>
        <note xml:id="n_sc_7_0" pname="d" oct="5" dur="32"/>
        <note xml:id="n_sc_8_0" pname="c" oct="5" dur="32"/>
      </beam>
      <beam>
        <note xml:id="n_sc_9_0" pname="c" oct="5" dur="8"/>
        <note xml:id="n_sc_10_0" pname="c" oct="5" dur="8"/>
      </beam>
    </layer>
  </staff>
</measure>
<measure n="2" xml:id="m_sc_11">
  <staff n="1">
    <layer n="1">
      <beam>
        <note xml:id="n_sc_12_0" pname="c" oct="5" dur="16"/>
        <note xml:id="n_sc_13_0" pname="f" oct="5" dur="16"/>
      </beam>
      <note xml:id="n_sc_14_0" pname="f" oct="5" dur="4"/>
      <rest xml:id="n_sc_15_0" dur="16"/>
      <note xml:id="n_sc_16_0" pname="f" oct="5" dur="16"/>
    </layer>
  </staff>
</measure>
```

# Rosetta Stone of Digital Representations



## MusicXML

```
<measure number="1">
  <attributes>
    <divisions>8</divisions>
    <key>
      <fifths>-1</fifths>
    </key>

    <beats>2</beats>
    <beat-type>4</beat-type>

    <staves>1</staves>
    <clef number="1">
      <sign>G</sign>
      <line>2</line>
      <clef-octave-change>0</clef-octave-change>
    </clef>
  </attributes>
  <note>
    <pitch>
      <step>C</step>
      <octave>5</octave>
    </pitch>
    <duration>6</duration>
    <voice>1</voice>
    <type>eighth</type>
    <dot/>
    <stem>down</stem>
    <beam number="1">begin</beam>
    <notations/>
  </note>
```

```
<note>
  <pitch>
    <step>C</step>
    <octave>6</octave>
  </pitch>
  <duration>2</duration>
  <voice>1</voice>
  <type>16th</type>
  <stem>down</stem>
  <beam number="1">begin</beam>
  <beam number="2">begin</beam>
  <notations/>
</note>
<note>
  <pitch>
    <step>B</step>
    <alter>-1</alter>
    <octave>5</octave>
  </pitch>
  <duration>2</duration>
  <voice>1</voice>
  <type>16th</type>
  <stem>down</stem>
  <beam number="1">continue</beam>
  <beam number="2">continue</beam>
  <notations/>
</note>
```

```
<note>
  <pitch>
    <step>A</step>
    <octave>5</octave>
  </pitch>
  <duration>2</duration>
  <voice>1</voice>
  <type>16th</type>
  <stem>down</stem>
  <beam number="1">continue</beam>
  <beam number="2">continue</beam>
  <notations/>
</note>
<note>
  <pitch>
    <step>G</step>
    <octave>5</octave>
  </pitch>
  <duration>2</duration>
  <voice>1</voice>
  <type>16th</type>
  <stem>down</stem>
  <beam number="1">end</beam>
  <beam number="2">end</beam>
  <notations/>
</note>
</measure>
```



# Rosetta Stone of Digital Representations



## Standard MIDI File

4d	54	68	64	00	00	00	06	00	01	00	02	00	60	4d	54	72	6b	00	00
00	3c	00	ff	01	18	50	72	6f	64	75	63	65	64	20	75	73	69	6e	67
20	53	68	61	72	70	45	79	65	32	00	ff	59	02	00	00	00	ff	59	02
ff	00	00	ff	51	03	0f	42	40	00	ff	58	04	02	02	18	08	86	00	ff
2f	00	4d	54	72	6b	00	00	00	a9	00	c0	00	00	b0	07	50	00	ff	59
02	ff	00	00	90	48	40	48	80	48	40	00	90	4a	40	0c	80	4a	40	00
90	48	40	0c	80	48	40	00	90	48	40	30	80	48	40	00	90	48	40	30
80	48	40	00	90	48	40	18	80	48	40	00	90	4d	40	18	80	4d	40	00
90	4d	40	60	80	4d	40	18	90	4d	40	18	80	4d	40	00	90	4d	40	18
80	4d	40	00	90	51	40	18	80	51	40	00	90	51	40	60	80	51	40	18
90	54	40	18	80	54	40	00	90	54	40	48	80	54	40	00	90	51	40	18
80	51	40	00	90	54	40	18	80	54	40	00	90	52	40	18	80	52	40	00
90	51	40	18	80	51	40	00	90	4f	40	18	80	4f	40	00	ff	2f	00	